

F10 Displays, Indicators and Controls



BMW Service

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General information

Symbols used

The following symbol / sign is used in this document to facilitate better comprehension and to draw attention to particularly important information:



Contains important safety guidance and information that is necessary for proper system functioning and which it is imperative to follow.

Information status and national-market versions

The BMW Group produces vehicles to meet the very highest standards of safety and quality. Changes in terms of environmental protection, customer benefits and design make it necessary to develop systems and components on a continuous basis. Consequently, this may result in differences between the content of this document and the vehicles available in the training course.

As a general principle, this document describes left-hand drive vehicles in the European version. Some controls or components are arranged differently in right-hand drive vehicles than those shown on the graphics in this document. Further discrepancies may arise from market-specific or country-specific equipment specifications.

Additional sources of information

Further information on the individual topics can be found in the following:

- in the Owner's Handbook
- in the integrated service technical application

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The information in the document is part of the BMW Group technical training course and is intended for its trainers and participants. Refer to the latest relevant BMW Group information systems for any changes/supplements to the technical data.

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F10 Displays, Indicators and Controls

1. System Overview

1.1. Introduction

As in all other BMW models, the operating and control concept of the new BMW 5 Series F10 is based on clear and optimum structuring of the cockpit. A reduced number of switches simplifies the logical operation. The display, indicator and control elements are organized in a hierarchical arrangement corresponding to their function.



F10 Overview of the display, indicator and control elements

Index	Explanation
1	Head-up display HUD
2	Central Information Display, CID
3	Favorite buttons for individual assignment and operation of the heating and air conditioning system
4	Controller CON
5	Gear selector switch GWS
6	Steering wheel buttons
7	Driver assistance systems operating unit
8	Instrument cluster KOMBI

F10 Displays, Indicators and Controls

2. System Components

2.1. Instrument cluster

The instrument panel receives information on the wiring harness in the form of analog and digital electrical signals. These signals are processed and displayed in the instrument panel or passed on as information to other control units.

As a control unit, the instrument panel is a bus device in the MOST bus and in the powertrain CAN.

2.1.1. Basic instrument panel

The basic instrument panel already familiar from the F07 is used in all versions of the F10. A TFT display with a resolution of 640 x 160 pixels is located in the basic instrument panel under the round instruments. It has a screen diagonal of 5.7". The round instruments are always surrounded by a closed ring.



F10 Basic instrument panel (Not US)

Index	Explanation
1	TFT display
2	Closed instrument ring

2.1.2. Brake energy display

The F10 comes standard with Brake Energy Regeneration. Brake Energy Regeneration transforms the vehicle's kinetic energy into electricity, and uses this power to charge the battery. As a result, the battery draws less power from the engine, and fuel consumption is reduced.

The kinetic energy of the vehicle is converted into electrical energy while the vehicle is in coasting mode or under braking. The battery is partially charged and the fuel consumption can be reduced.

The blue indicator in the instrument panel below the tachometer, which lights up whenever kinetic energy is converted into electricity (while coasting off the accelerator or under braking). The red section of the display below the "P" is the mile per gallon gauge.

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2. System Components



F10 Current fuel consumption display in coasting (overrun) mode

2.1.3. On-board computer

The on-board computer functions can be called up by briefly pressing the on-board computer button on the steering column switch.

Pressing the on-board computer button again displays information in the following order:

- Range
- Average fuel consumption
- Average speed
- Distance (with activated route guidance)
- Estimated time of arrival (with activated route guidance)
- Date
- Road sign recognition.



F10 Buttons on the steering column switch

TE08-0616

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2. System Components

Index	Explanation
1	Button for on-board computer
2	High-beam assistant button
3	Steering-column switches

More detailed information can be found in the current vehicle owner's manual for the BMW 5 Series.

2.2. Central Information Display

Depending on the equipment, two different versions of the Central Information Display CID are installed in the F10.

As on all new BMW models, the system is operated by means of the central control element, the controller.

The central information display is an integrated display and operating unit for the following functions:

- Audio functions, for example radio, CD, MP3
- Telephone and data services
- On-board computer, journey computer
- Vehicle info, integrated operating instructions IBA
- Heating and air conditioning system
- Personalized features, for example radio station selection
- Vehicle functions, for example PDC and EDC
- BMW Services.

2.2.1. CID with 10.2" screen diagonal

In conjunction with the Navigation system (option 609), a CID with 10.2" screen diagonal is installed. The resolution of the display is 1280 x 480 pixels.



F10 CID with 10.2" screen diagonal

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2. System Components

2.2.2. CID with 7" screen diagonal

In conjunction with a vehicle configuration without a navigation system, a CID with 7" screen diagonal is installed. The resolution of this display is 800 x 480 pixels.



F10 CID with 7" screen diagonal

2.3. Head-Up Display

The very name "Head-Up" describes the principle benefit of this system. The Head-Up Display HUD projects a virtual image into the driver's field of vision. Important information such as cruise control details or arrow displays from the navigation system are projected onto the windscreen and are thus permanently visible within the driver's field of view.

The head-up display (option 610) in the F10 contains various functions aimed at enhancing road safety and driving comfort.

The head-up display includes the following:

- the Dynamic Cruise Control DCC
- the Active Cruise Control with Stop & Go function
- the collision warning with brake application function
- information from the navigation system
- Check Control messages
- road speed.

Having the displays in the driver's direct field of view increases safety, as the eyes are always on the traffic.

F10 Displays, Indicators and Controls

2. System Components



F10 Head-up display

For more information on the head-up display, refer to the F01 entitled "Head-Up Display HUD" training material available on TIS and ICP.

2.4. Night Vision 2

The BMW Night Vision 2 system provides the driver with a black-and-white image of the driving environment ahead of the vehicle in the Central Information Display CID.

BMW Night Vision 2 is a 100 % passive system without active infrared illumination. Objects situated ahead of the vehicle are shown in varying degrees of brightness depending on their temperature. This enables the driver to detect in good time heat-emitting objects, such as people, animals and other vehicles.

This information is recorded with a far infrared camera via a special imaging sensor which detects the infrared radiation in a specific wavelength range.

Intelligent algorithms in the control unit makes it possible to automatically detect persons in the image. Following evaluation of distance and direction of movement, a symbol on the central information display and in the head-up display warns the driver of any persons at risk.



F10 Night Vision display in the head-up display

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2. System Components

Night Vision 2 is available for the F10 as the optional equipment BMW Night Vision with pedestrian detection (option 6UK).

As in the F01/F02, the video camera for BMW Night Vision is installed in the F10 behind the radiator grill, on the top left corner.

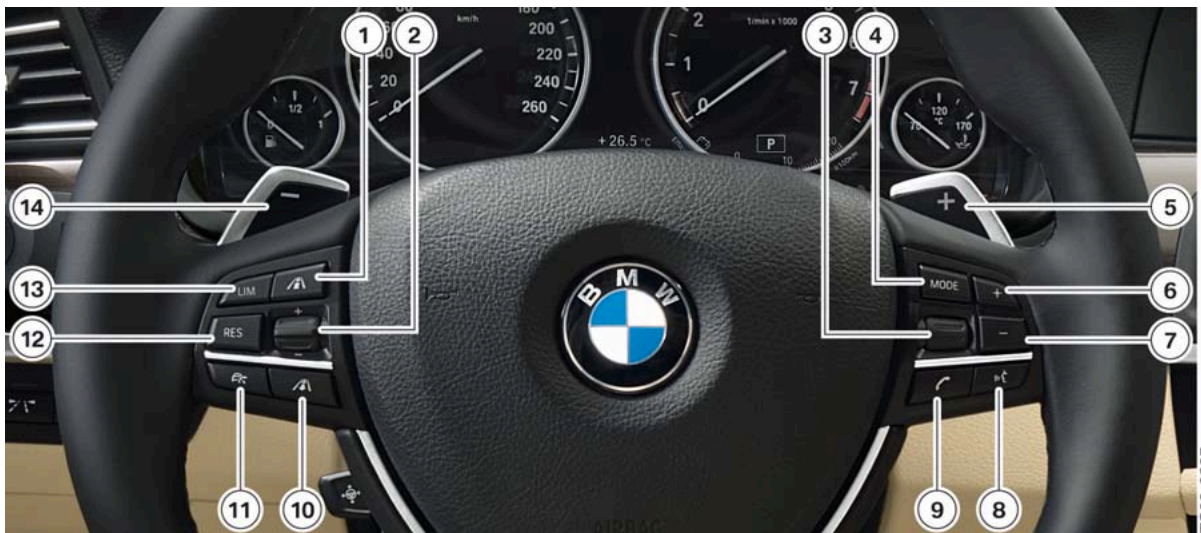
For more information on Night Vision 2, refer to the F01 "BMW Night Vision 2" training material available on TIS and ICP.

2.5. Controls on the steering wheel

There is a switch block in the steering wheel on the left and right.

The operating elements for cruise control with braking function (Dynamic Cruise Control DCC) and the Active Cruise Control ACC are located on the left side of the steering wheel.

The controls for operation of the radio and telephone functions are on the right.



F10 Controls on the steering wheel

Index	Explanation
1	Reduce distance button (only with option 5DF)
2	± rocker switch, change speed, set speed
3	Knurled wheel, select/set radio station or music track
4	MODE button, switch audio sources
5	Shift up shift paddle (only with option 2TB)
6	+ rocker switch, increase volume
7	- rocker switch, reduce volume
8	Voice control button
9	Telephone button

F10 Displays, Indicators and Controls

2. System Components

Index	Explanation
10	Increase distance button (only with option 5DF)
11	Switch on/off, interrupt ACC/DCC
12	Resume, call up stored speed button
13	Speed limit button or the "SET" speed button in the US
14	Shift down shift paddle (only with option 2TB)

2.6. Operating controls in the center console

The operating elements in the center console have the same function and arrangement as those in the F01.



F10 Operating controls in the center console

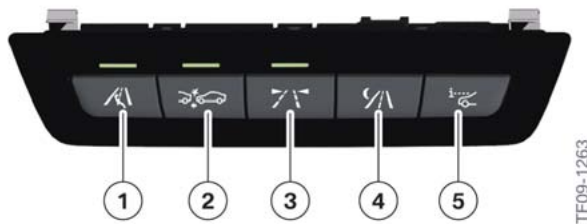
Index	Explanation
1	Gear selector switch
2	Controller
3	Parking brake
4	Automatic Hold
5	Park Distance Control or parking assistance
6	Handling setting switch
7	Dynamic Stability Control

F10 Displays, Indicators and Controls

2. System Components

2.7. Driver assistance systems operating unit

The individual assist systems can be activated or deactivated via the assist system operating unit. It is located next to the steering wheel in the dashboard.



F10 Assist system operating unit

Index	Explanation
1	Blind Spot Detection
2	Collision warning (adaptive dynamic brake control with warning function)
3	Lane Departure Warning
4	Night Vision with person recognition
5	Head-Up Display

For more information on the assist systems refer to the "F10 Assist systems" of this training material.



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